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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,823	02/10/2000	Oren Marmor	Marmor=2	3103

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EXAMINER

PAYNE, DAVID C

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/500,823	MARMUR, OREN
	Examiner	Art Unit
	David C. Payne	2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 February 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 - 10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 February 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____ .
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5.6.7</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 – 10 are provisionally rejected under the judicially created doctrine of double patenting over claims 1 – 12 and 14 – 20 (note claims 8 – 21 have been renumbered as 7 – 20, based on rule 126) of copending Application No. 09/500,824. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: The instant application ('823) claims an optical communication network with protection links that is capable of detecting energy below a pre-defined threshold (fault condition) and thereby causing a switch from a failed link to a protection link. The instant application does not claim that the non-failed links continue operation provided that the overall transmitted energy exceeds a pre-defined threshold. However, it would have been obvious to one of ordinary skill in the art at the time of invention that failed links are defined as having

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energy below a pre-defined threshold and non-failed links are necessarily above a pre-defined threshold since it is common to have a minimum energy level for reception of a signal at a receiver.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Specification

4. The abstract of the disclosure is objected to because the abstract must be no longer than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 7 and 9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant merely mentions – p. 9 lines 25 – 35 --, another type of protection for channels (wavelengths), however no embodiment disclosed a wave division multiplexer. To the contrary, the description and figures disclose a switch coupling the fibers but not a multiplexer.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1- 4, 7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Claim 1 recites the limitation "energy received over the reception optical link at the second location" in lines 16 and 17. There is insufficient antecedent basis for this limitation in the claim. The applicant in lines 8 and 9 describe "reception links". However, the phrase as mentioned above leaves ambiguity regarding which reception links. Is this phrase referring to a link carrying traffic towards or away from the second location? This can be understood in either of two ways: 1) The reception link carrying traffic into the first location measured at the far end (second location) or 2) The reception link carrying traffic into the second location measured at the near end (second location). The applicant could clarify this limitation by referencing reception links a first and second reception links, where first and second reception links have been adequately introduced in the claim.
10. Claim 2 recites the limitation "said at least one failing channel" in lines 11 and 12. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 7 recites the limitation "said plurality of optical transmitters" in lines 11 and 12. There is insufficient antecedent basis for this limitation in the claim.

Drawings

12. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "wave division multiplexer" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1,2,5,6,7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denkin et al. US 6,266,168 B1 (Denkin).

Re claims 1 and 2, Denkin disclose an optical communication network (figure 1) comprising an optical transmission and reception links extending between first and second locations and carrying traffic in normal operation from the first location to the second location and protections transmission and reception links for carrying the traffic in the event of a fault, a method for managing routing of traffic to the protection links, which method comprises the steps of:

detecting a fault on the optical link; (e.g., c/l: 3: 20 - 35)

checking the energy on the link with respect to a pre-defined threshold; (e.g., c/l: 2:20 - 25)

switching traffic transmission and reception if energy falls below the pre-defined threshold.

(e.g., c/l: 2: 50 – 60)

Denkin does not disclose that the fault is detected at either the first or second location. However, it would have been obvious to one of ordinary skill in the art at the time of invention that since the Denkin invention monitors faults at the far end, this is equivalent to measuring faults at the second location.

Re claims 5 and 6, Denkin furthermore disclosed on switching channels along a wavelength path failures (e.g., c/l: 10: 40 – 50). While Denkin does not disclose that non-failing channels undergo continuous operation it would have been obvious to one of ordinary skill in the art at the time of invention to claim as such. It is well known to switch signals along a path failure and it widely recognized by those of ordinary skill in the art of the lack of need and inefficiency of rerouting all

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signals in a network due to failure along a particular path unless necessary to do so. Furthermore, continuous operation attends to the same objective of non-switching of paths for non-failing channels.

Re claim 7, Denkin disclosed

a wave division multiplexer/ demultiplexer (OMU/ ODU, figure 1),
pair of transmission and reception links (figure 1, #25, #26,) and protection links (figure 1, #30,
#31);
a plurality of optical receivers (not shown);
detection of signal loss and checking against a threshold, (e.g., c/l: 2:20 - 25)
protection means able to divert signal (OPSU).

While Denkin does not disclose the optical cross connect as a blocking mechanism it would have been obvious to one of ordinary skill in the art at the time of invention that the switch blocks signals from the laser beams on the failing lines since they are no longer connected to the throughput path. While Denkin does not show the receivers in this system it would have been obvious to one of ordinary skill in the art at the time of invention that an optical communication system involves transmitters and receivers by definition and that receivers are the logical connection point from the demultiplexed signals.

Re claim 8, Denkin disclosed monitoring the protection links (e.g., c/l: 7:1/-10).

15. Claims 1 – 10 (insofar as they are understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshita et al. US 6,407,834 B1 (Takeshita).

Re claims 1 and 2, Takeshita disclose an optical communication network (figure 1) comprising an optical transmission and reception links extending between first and second locations and carrying

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traffic in normal operation from the first location to the second location and protections transmission and reception links for carrying the traffic in the event of a fault, a method for managing routing of traffic to the protection links, which method comprises the steps of:
detecting a fault on the optical link; (e.g., c/l: 10: 15 – 40)
checking the energy on the link with respect to a pre-defined threshold; (e.g., c/l: 10: 45 – 50)
switching traffic transmission and reception if energy falls below the pre-defined threshold.
(e.g., c/l: 10: 50 – 60)

Takeshita does not disclose that the fault is detected at either the first or second location. However, it would have been obvious to one of ordinary skill in the art at the time of invention that since the Takeshita invention measures trouble or quality deterioration of optical signals anywhere in the wavelength path that this is equivalent to the claimed invention. The Takeshita invention is not restricted to measuring a drop in signal quality at any one location but rather is capable of measure fault anywhere along the wavelength path.

Re claims 3 and 4, Takeshita disclosed the ability to protect any wavelength or a bundle of wavelengths (e.g., c/l: 5: 15 – 45).

Re claims 5 and 6, Takeshita furthermore disclosed on switching channels along a wavelength path failures (e.g., c/l: 10: 40 – 50). While Takeshita does not disclose that non-failing channels undergo continuous operation it would have been obvious to one of ordinary skill in the art at the time of invention to claim as such. It is well known to switch signals along a path failure and it widely recognized by those of ordinary skill in the art of the lack of need and inefficiency of rerouting all signals in a network due to failure along a particular path unless necessary to do so. Furthermore, continuous operation attends to the same objective of non-switching of paths for non-failing channels.

Re claim 7, Takeshita disclosed

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a wave division multiplexer/ demultiplexer (optical ADM, figure 1),
pair of transmission and reception links (figure 1, 103a, 103b, e.g., 103c, 103d) and protection
links (figure 1, clockwise);
a plurality of optical receivers (terminal station, figure 1);
detection of signal loss and checking against a threshold, (e.g., c/l: 10: 15 – 40)
protection means able to divert signal (optical cross connect).

While Takeshita does not disclose the optical cross connect as a blocking mechanism it would have been obvious to one of ordinary skill in the art at the time of invention that the switch blocks signals from the laser beams on the failing lines since they are no longer connected to the throughput path.

Re claims 8, 9, and 10, Takeshita disclosed monitoring of all wavelength paths (e.g., 5/40 – 45, 6/35 – 55). This is understood to include spare (protection) links and any wavelength links with or without signals.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

dcp
November 29, 2002

JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600